

Archives of Biochemistry and Biophysics

Editors

PAUL D. BOYER
JESSE P. GREENSTEIN
E. NEWTON HARVEY
J. G. KIRKWOOD
HENRY LARDY
K. LINDERSTRØM-LANG
C. M. McCAY
THOMAS L. McMEEKIN
H. S. MASON
A. NEUBERGER
F. F. NORD
E. C. POLLARD
E. W. PUTNAM
C. RIMINGTON
HOWARD K. SCHACHMAN
JOHN C. SHEEHAN
H. THEORELL
K. V. THIMANN
W. W. UMBREIT
C. H. WERKMAN
R. J. WILLIAMS
R. W. G. WYCKOFF



VOLUME 74

1958

ACADEMIC PRESS INC., PUBLISHERS

Archives of Biochemistry and Biophysics



Copyright ©, 1958, by Academic Press Inc
Made in United States of America

CONTENTS OF VOLUME 74

NUMBER 1, MARCH 1958

HELMUT METZNER, BARBARA METZNER AND MELVIN CALVIN. Labile Products of Early Carbon Dioxide Fixation in Photosynthesis.	1
F. G. DHYSE AND ROY HERTZ. The Effects of Actithiazic Acid on Egg White-Induced Biotin Deficiency and upon the Microbial Formation of Biotin Vitamers in the Rat.	7
E. K. OYAKAWA AND B. H. LEVEDAHL. Testosterone Binding to Bovine and Human Serum Albumin: The Role of Tyrosine Groups.	17
G. Y. N. IYER. Free Amino Acid Levels in Normal and Anemic Erythrocytes in Relation to their Potassium Content and Rate of Glycolysis.	24
C. R. WOESE. Interpretation of Inactivation Kinetics of Spores of <i>Bacillus megatherium</i>	28
S. M. BOSE AND K. THOMAS JOSEPH. Studies on the Reactive Groups of Collagen. I. Acylation and Guanidino Group Destruction.	46
B. JIRGENSONS. Optical Rotation and Viscosity of Native and Denatured Proteins. X. Further Studies on Optical Rotatory Dispersion.	57
B. JIRGENSONS. Optical Rotation and Viscosity of Native and Denatured Proteins. XI. Relationships between Rotatory Dispersion, Ionization and Configuration.	70
L. F. LELOIR, C. E. CARDINI AND J. M. OLAVARRÍA. Phosphorylation of Acetylhexosamines.	84
DAVID C. HERTING, STANLEY R. AMES AND PHILIP L. HARRIS. The Lipide-Bound Volatile Acids of Animal Fats.	92
W. WATSON ALBERTS, E. BROCHMANN-HANSEN, ROBERT B. AIRD AND SEYMOUR WINSTON. Polarographic Determination of Oxygen Tension in Samples of Human Cerebrospinal Fluid. . . .	100
DAVID RACUSEN. The Metabolism and Translocation of 3-Aminotriazole in Plants.	106

MING-AN WU AND R. C. BURRELL. Flavonoid Pigments of the Tomato (<i>Lycopersicum esculentum</i> Mill.).....	114
J. SRI RAM AND PAUL H. MAURER. Modified Bovine Serum Albumen. IV. Characterization and Immunochemical Studies of the O-Acetylated Derivative.....	119
ERNEST SONDHEIMER. On the Distribution of Caffeic Acid and the Chlorogenic Acids Isomers in Plants.....	131
PAUL A. SWENSON. Substrate-Dependent Ultraviolet Dosage Response Patterns of Phosphate Uptake by Yeast.....	139
ULRICH WEISS, FRIEDA STRELITZ, HELEN FLON AND IGOR N. ASHESHOV. Antibiotic Compounds with Action Against Bacterial Viruses: Neohydroxyaspergillie Acid.....	150
MARTIN B. MATHEWS AND IRENE LOZAITYTE. Sodium Chondroitin Sulfate-Protein Complexes of Cartilage. I. Molecular Weight and Shape.....	158
R. L. CONNER AND MISAKO NAKATANI. Stigmasterol Antagonism of Certain Growth Inhibitors for <i>Tetrahymena piriformis</i>	175
R. P. WAGNER, ARLOA BERGQUIST AND G. W. KARP. Some Factors Influencing Valine and Isoleucine Transaminase Activity in <i>Neurospora crassa</i>	182
EARL H. HESS. The Polyphenolase of Tobacco and Its Participation in Amino Acid Metabolism. I. Manometric Studies.....	198
KENNETH V. THIMANN AND BABETTE S. RADNER. The Biogenesis of Anthocyanin. VI. The Role of Riboflavine.....	209
L. K. RAMACHANDRAN AND H. FRAENKEL-CONRAT. The Estimation of Protein Contamination in Ribonucleic Acid.....	224
J. W. DAVIES AND G. HARRIS. Hydrolytic Cleavage of Insulin on Ion-exchange Resins.....	229
H. A. SAROFF AND W. L. CHOATE. Reversible Aggregation of Serum Albumin in the Reaction with Copper (II).....	245
GEORGE ROSENFELD, LEMUEL C. LEEPER AND SIDNEY UDENFRIEND. Biosynthesis of Norepinephrine and Epinephrine by the Isolated Perfused Calf Adrenal.....	252
BERTRAM SACKTOR AND DONALD G. COCHRAN. The Respiratory Metabolism of Insect Flight Muscle. I. Manometric Studies of Oxidation and Concomitant Phosphorylation with Sarcosomes.....	266

LETTERS TO THE EDITORS

JAY S. ROTH. Observations on the Instability in the Ribonucleic Acid of Microsomal Ribonucleoprotein.....	277
---	-----

T. H. STOUTD, W. J. McALEER, M. A. KOZLOWSKI AND VIRGINIA MARLATT. The Microbial Dehydrogenation of Some Pregnanes and Allopregnanes to 1.4-Pregnadienes. . .	280
IRVING MELNICK, ABRAHAM CANTAROW AND KARL E. PASCHKIS. Effect of Certain Uracil Analogs on Incorporation of Uracil into RNA.	281
CHARLES G. SKINNER AND WILLIAM SHIVE. Synergistic Effect of Gibberellin and 6-(Substituted)-purines on Germination of Lettuce Seed.	283
Book Reviews.	287

NUMBER 2, APRIL 1958

P. SRERE, J. R. COOPER, M. TABACHNICK, AND E. RACKER. The Oxidative Pentose Phosphate Cycle. I. Preparation of Substrates and Enzymes.	295
J. COOPER, P. A. SRERE, M. TABACHNICK, AND E. RACKER. The Oxidative Pentose Phosphate Cycle. II. Quantitative Determination of Intermediates and Enzymes.	306
M. TABACHNICK, P. A. SRERE, J. COOPER, AND E. RACKER. The Oxidative Pentose Phosphate Cycle. III. The Interconversion of Ribose 5-Phosphate, Ribulose 5-Phosphate and Xylulose 5-Phosphate.	315
E. RACKER AND E. A. R. SCHROEDER. The Reductive Pentose Phosphate Cycle. II. Specific C-1 Phosphatases for Fructose 1,6-Diphosphate and Sedoheptulose 1,7-Diphosphate.	326
ALFRED F. HARRIS AND ALBERT E. SOBEL. Calcification. XX. The Cationic Repression of Metachromasy.	345
B. THEODORE COLE AND HOMER PATRICK. Tissue Uptake and Excretion of Bromine-82 by Rats.	357
TAKETAMI SAKURAGI. The Antithiamine Activity of the 2-Alkylthio Analogs of Thiamine in Microorganisms.	362
MAX A. EISENBERG. Intermediate Metabolism of Electric Tissue in Relation to Function. I. Glycolytic Enzymes and Succinic Oxidase.	372
ANGELO SCANU, LENA A. LEWIS, AND F. MERLIN BUMPUS. Separation and Characterization of the Protein Moiety of Human α_1 -Lipoprotein.	390
THOMAS C. SMITH AND BRITTA RICHTERICH. Patterns of Succinoxidase, Cytochrome Oxidase, Nucleic Acids and Other Constituents in Mammary Glands of Pregnant and Lactating Rats.	398

K. TSUKIDA AND L. ZECHMEISTER. The Stereoisomerization of β -Carotene Epoxides and the Simultaneous Formation of Furanoid Oxides	408
W. McD. ARMSTRONG. Surface-Active Agents and Cellular Metabolism. II. Micelle Formation as a Factor in the Inhibition of Yeast Metabolism by Long-Chain Alkyl Sulfates	427
R. E. BOLDT, A. E. HARPER, AND C. A. ELVEHJEM. The Effect of Amino Acids on the Survival of the Hyperthyroid Rat	437
GEORGE L. ELLMAN. A Colorimetric Method for Determining Low Concentrations of Mercaptans	443
S. L. FRIESS, E. R. WHITCOMB, BART T. HOGAN, AND P. A. FRENCH. The Action of Some Diamine Optical Antipodes on Acetylcholinesterase Inhibition and on Conduction in Desheathed Bullfrog Sciatic Nerve	451
NANCY A. FISCHER, EVA M. BENSON, AND MARIAN E. SWENDSEID. The Distribution of Vitamin B ₁₂ in the Developing Chick Egg	458
INES MANDL, H. ZIPPER AND L. T. FERGUSON. <i>Clostridium histolyticum</i> Collagenase: Its Purification and Properties	465

LETTERS TO THE EDITORS

SHERMAN R. DICKMAN, LEON H. WHITE, AND JAMES O. MASON. Human Urine Ribonuclease	476
ICHIO NOGUCHI AND SHIRO TAKASHIMA. Further Observations on Chlorophyll-Lipoprotein	478
SHIZUO HATTORI, SEIICHI YOSHIDA AND MASAO HASEGAWA. Biological Conversion of Shikimic Acid	480
Book Reviews	483
List of Books Received for Review	490
Erratum	493
Author Index	494
Subject Index	496
Index of Book Reviews	498